

REMARKS

The Examiner rejected claim 1 under 35 USC 112, second paragraph, indicating that claim 1 indefinite because sand reads on either of a natural aggregate filler and an abrasive particle. In accordance with the Examiner's comments, claim 1 has been amended to indicate that the natural aggregate filler is different than the abrasive.

The Examiner provisionally rejected claims 1-11 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/166,429. A terminal disclaimer is attached herewith to overcome the provisional rejection.

The Examiner rejected claims 1-11 under 35 USC 102(b) or in the alternative under 35 USC 103(a) as either being anticipated by or obvious over Murray (U.S. 4,398,960), Raponi (U.S. 4,058,406), Lindstrom (U.S. 1,633,790), Webster ("recycling of spent abrasive media in nonstructural concrete" Journal of Environmental Engineering, Vol. 122, #9, 1996, pages 840-849), and Barrow (U.S. 2003/0084822).

Claim 1 has been amended in part to indicate that the abrasive particles are thermoset particulate media selected from the group consisting of urea formaldehyde, cast acrylic, melamine formaldehyde, phenol formaldehyde, polyester, epoxy, and polyurethane.

Applicant submits that claim 1 is allowable over Murray in that Murray fails to teach or suggest the use of a spent abrasive at all and further fails to teach or suggest the use of a thermoset material as claimed. Even if the fine aggregate material disclosed by Murray is deemed to fulfill the thermoset material as claimed, the percentages of the Murray disclosure do not fall within those recited in claim 1. More particularly, Murray indicates that it is critical to utilize 25% to 35% fine aggregate of about 100 to pan mesh, while Applicant's claim 1 recites 8% to 15% of the abrasive particles. Applicant thus submits that claim 1 is allowable over Murray and that claims 2-4 and claims 7-11 are allowable as depending therefrom.

Raponi also fails to teach or suggest the limitations of claim 1, in particular that the abrasive particles are thermoset particulate media as claimed. Raponi, on

the other hand, does not use a spent abrasive at all. In addition, Raponi discloses that the key aspect of the invention is the use of polyethylene strips which are typically 8" by 1/4", in which would not be suitable for use of a blasting abrasive at all. Applicant thus submits that claim 1 is allowable and that claims 2-4 and claims 7-11 are allowable as depending therefrom.

Applicant further submits that claim 1 is allowable over Lindstrom, which also fails to disclose a spent abrasive. Lindstrom teaches that Portland cement is ground finer than a standard Portland cement such that 90% passes through a 200 mesh sieve. In addition, Lindstrom teaches the use of 5% to 10% by weight of iron-free abrasive carborundum or corundum of about 100 mesh fineness. While Lindstrom indicates that other abrasives may be used, it is specified that these other abrasives should have substantially the same degree of hardness as carborundum and substantially the specific gravity of cement (Column 2, lines 74-84). As amended, claim 1 requires that the abrasive particles are thermoset particulate media within a specific group. It is noted that the hardness of these thermoset materials is substantially less than that of carborundum and corundum. Corundum has a hardness of 9 on the Mohs scale while carborundum has a hardness of 9.5 on the Mohs scale. On the other hand, the thermoset particulate media recited in claim 1 has a hardness typically ranging from about 2 to 4 on the Mohs scale. Lindstrom thus teaches away from the use of such particles. Applicant thus submits that claim 1 is allowable over Lindstrom and that claims 2-4 and 7-11 are allowable as depending therefrom.

Applicant further submits that claim 1 defines over Webster, which utilizes spent sand as part of the concrete mixture. As already discussed, claim 1 now recites that the abrasive particles are thermoset particulate media from a specific group which clearly does not include sand and which has a substantially different hardness and specific gravity therefrom. The materials recited in claim 1 would make the concrete block substantially lighter than that produced with a block of comparable amount of spent sand, which would be an advantage in moving the blocks during construction. Applicant thus submits that claim 1 is allowable over Webster and that claims 2-4 and 7-11 are allowable as depending therefrom.

Applicant further submits that claim 1 is allowable over Barrow, which recites the use of 25% to 90% plastic particles in a cement mixture wherein the size of the particles may vary but are preferably from 3mm to 15mm. The plastic particles of Barrow are clearly not a spent abrasive. In addition, the particle sizes recited do not fall within the range in claim 1. In addition, claim 1 requires 8% to 15% of the abrasive particles whereas Barrow teaches 25% to 90% plastic particles, which is clearly outside the range of claim 1. Applicant thus submits that claim 1 is allowable and that claims 2-4 and 7-11 are allowable as depending therefrom.

Applicant has added new dependent claims 21 and 22 to further define the invention. Claim 21 focuses on a block having a compressive strength of at least 4,000 psi. Applicant submits that none of the cited references teaches a block with this compressive strength in which the block utilizes the abrasive particles as recited in claim 1.

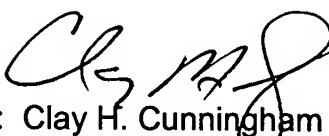
Claim 22 depends from claim 21 and further requires that the block is free of a superplasticizer. Superplasticizers are used to make concrete flow more readily and in addition may substantially add to the compressive strength of the cured material. Claim 22 thus emphasizes that the compressive strength recited in claim 21 results without the use of such a superplasticizer.

In light of the amendments and discussion, Applicant submits that claims 1-4, 7-11, 21 and 22 are in allowable form.

In view of the foregoing, the Applicant respectfully requests reconsideration of the claims and most earnestly solicits the issuance of a formal notice of allowability for the claims. Please call the undersigned attorney if any questions remain after this amendment.

Respectfully submitted at Canton, Ohio this 11th day of April, 2008.

SAND & SEBOLT


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